

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A hard handoff method for making a mobile client continuously receive internet services by carrying out a hard handoff procedure with a target radio network upon encountering a hard handoff situation in the mobile client, comprising the steps of:

~~carrying out a hard handoff procedure with the target radio network upon encountering a hard handoff situation in the mobile client, including;~~

carrying out a radio connection between the mobile client and a target radio network when a handoff is requested;

establishing a Point-to-Point Protocol (PPP) link between the mobile client and a target packet data service node of the target radio network without closing a current traffic link;

carrying out a mobile IP registration procedure of the mobile client to the target packet data service node after the PPP link is completed, comprising transmitting an agent advertisement message to the mobile client, and the mobile client transmitting an agent solicitation to the target packet data service node;

closing the channel of the mobile client to a current packet data service node after the mobile IP registration to the target packet data service node is completed; and

shifting a traffic channel of the mobile client to the target packet data service node from the current packet data service node after setting all links.

2. (Previously Presented) The hard handoff method of claim 1, wherein the mobile client carries out a setting of independent multiple PPP links and their control functions, wherein the setting of the multiple PPP links is carried out in both the case when a frequency

used in the target radio network and a frequency used in a currently serving radio network are the same and when they are not the same.

3. (Previously Presented) The hard handoff method of claim 2, wherein in setting the multiple PPP links, a channel allocation is carried out in when a same frequency is used in the target radio network and the currently serving radio network.

4. (Previously Presented) The hard handoff method of claim 2, wherein in setting the multiple PPP links, a frequency allocation and a channel allocation are carried out in case of a different frequency is used in the target radio network and the currently serving radio network.

5. (Previously Presented) The method of claim 1, wherein carrying out the mobile IP registration procedure further comprises transmitting a registration request to an Authentication, Authorization and Accounting (AAA) server and receiving a mobile IP registration reply from the AAA server.

6. (Previously Presented) The method of claim 5, wherein the registration request is transmitted by the target packet data service node and the reply is received at the target packet data service node.

7. (Previously Presented) The method of claim 6, wherein the target packet data service node transmits confirmation of the mobile IP registration reply to the mobile client.

8. (New) A method for providing a hard handoff between a mobile client and a target radio network while maintaining continuous communication with internet services via a communication channel, comprising in the order recited the steps of:

 sending a handoff signal from a current radio network to the mobile client;
 notifying a target packet data service node of the handoff;

initializing a point-to-point protocol session with the target packet data service node and the mobile client;

sending an agent advertisement from the target packet data service node to the mobile client and sending an agent solicitation from the mobile client to the target packet data service node to effectuate a mobile IP registration request;

sending to an authentication-authorization-accounting (AAA) server a registration request from the target packet data service node;

in response to receiving at the target packet data service node a reply from the AAA server, the target packet data service node sending confirmation of a mobile IP registration reply to the mobile client;

completing the hard handoff of the mobile client to the target radio network and then closing the communication channel to the current radio network;

sending from the mobile client to the current radio network a notice of handoff;
and

sending from the radio network to the current packet data service node notice of closure of the communication channel to the target packet data service node.

9. (New) The method of claim 8, comprising an initial step of sending a handoff request from a current radio network to a target radio network, and sending a handoff reply from the target radio network to the current radio network.

10. (New) The method of claim 7, wherein initializing a point-to-point protocol session comprises setting of multiple point-to-point protocol session links to accommodate use of a same frequency and of a different frequency by the target radio network and the radio network.

11. (New) The method of claim 10, wherein the setting of multiple point-to-point protocol session links comprises allocating a channel when the radio network and the target radio network are the same a channel allocation procedure is followed, and when the frequency

Application No. 09/846,464
In reply to the Notice of Appeal dated January 9, 2007

of the radio network is different than the target radio network, a frequency allocation and channel allocation procedure are carried out.